

Montana

Occupational Injuries and Illnesses By Age & Gender



*Effects of the changing age and gender distribution
on the workers' compensation system*

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A. Introduction

Montana is the fourth largest state in the Nation but 44th in terms of population. Today, there are about 387,500 people working in the state with a population of 882,779 . Accidents occur in the workplace but fortunately the injuries per worker have been declining.

In Montana, the total work-related injuries and illnesses in the last twenty (20) years have remained relatively stable; in spite of the fact, that there has been a raise in the civilian labor force which increases the exposure of workers to job related injuries and illnesses. This improved picture can be credited to the efforts of employers providing a safe working environment and the state and federal government enforcing awareness of Montana safety and health issues through inspection, consultation, technical assistance and training.

This report provides age and gender information on work-related occupational injuries and illnesses that occurred in Montana over the last six years. An occupational injury is any injury such as a cut, fracture, sprain, amputation, etc., which results from a work accident on a single day or during a single work shift. An occupational illness is any harm or damage caused by work-related events that occur on more than a single day or work shift. It includes acute chronic illnesses or diseases caused by inhalation, absorption, ingestion, or overuse syndrome.

This report analyzes trends as related to the changing age and gender distribution in the worker's compensation system in Montana. Most of the age and gender trends in Montana are reflected by other states also.

The initial development of the worker's compensation database was completed in 1995. Only six years of data limits our ability to see trends; however, there was some historical information we were able to find and use for prior years for comparison purposes.

B. Occupational Injuries/Illnesses by Age

The age distribution (age groups) of reported occupational injuries/illnesses has been changing over the last 25 years. The average age of claimants (people filing injury/illnesses reports) has increased from 30.2 years of age in fiscal year 1975 (FY75) to 38.1 years of age in fiscal year 2000 (FY00) and the average age of females is slightly greater than males. (see Table 1 below). The occupational injury/illnesses age groups were compared to employment and population for the same age groups. As the years pass, the older age groups or categories of the claimants, workers and population have been increasing in number with a strong relationship between them.

Average Ages: Injuries/Illnesses Persons								Table 1
	FY75	FY76	FY95	FY96	FY97	FY98	FY99	FY00
Male	29.8	33.0	36.2	36.5	37.2	37.3	37.6	37.4
Female	34.6	35.0	37.9	38.5	38.7	38.9	39.2	39.5
Total average	30.2	33.3	36.8	37.1	37.8	37.9	38.2	38.1

Sources: WCAP database & Annual Report, MT Division of Worker's Compensation

There has been a decline in the younger claimant age groups and an increase in the older age brackets from FY75 to FY00. (see Table 2 & 2.1). For example, the 15 to 29 age groups have declined from 48.1% in FY75 to 30.0% in FY00; whereas, the 35 to 54 age group percentages have grown from 30.2% in FY75 to 49.7% in FY00. The two highest percentage groups are hi-lighted in green to indicate the trend toward older claimants over the years in these tables.

We can see these trends in Graph 1. It indicates two things: 1) a shift of the curves to the right toward older injury age groups, 2) a flattening of the curves as the years past. In other words, there is a shift toward older claimants and fewer younger claimants over time. Also, the age groups are now more evenly distributed.

These changes are due to the population and the employment trends in Montana. The two highest age groups are hi-lighted in green on the population tables 3 and 4. The population tables have similar trends to the injury/illnesses by age on tables 2 and 2.1. The "baby boomers" age groups at the bottom of the tables correlates with the injury/illness age groups and the population age groups.

Injuries by Age Group

Table 2

Age Group	FY75	FY76	FY77	FY78	FY79	FY80	FY81	FY82	FY83	FY84	FY85	FY86	FY87	FY88	FY89	FY95	FY96	FY97	FY98	FY99	FY00
Below 15	0	27	50	35	30	33	28	20	22	18	8	21	11	26	35	42	15	20	27	14	33
15 - 19	2,653	2,923	3,080	3,196	3,547	3,372	2,952	2,554	2,041	1,860	1,764	1,469	1,179	1,475	1,715	1,738	1,828	1,725	1,586	1,647	1,796
20 - 24	5,535	6,355	6,968	7,374	7,800	7,562	7,238	6,543	5,871	6,063	5,389	4,370	3,226	3,790	3,829	3,823	3,927	3,927	3,711	3,833	4,100
25 - 29	4,314	4,988	5,377	5,673	6,038	6,433	6,405	6,045	5,611	6,121	5,801	5,260	4,002	5,179	5,059	3,984	4,237	4,118	3,870	3,817	3,833
30 - 34	2,926	3,149	3,449	3,707	3,957	4,191	4,482	4,406	4,349	4,676	4,780	4,480	3,806	4,844	4,987	4,797	4,723	4,476	4,013	3,648	3,631
35 - 39	2,332	2,527	2,572	2,834	2,864	3,144	3,011	2,929	3,063	3,356	3,299	3,389	2,900	3,785	4,064	4,912	5,050	5,130	4,747	4,713	4,592
40 - 44	2,014	2,058	2,082	2,252	2,292	2,330	2,301	2,237	2,295	2,425	2,414	2,297	1,983	2,719	3,038	4,109	4,458	4,726	4,671	4,392	4,693
45 - 49	1,837	1,815	1,852	1,720	1,846	1,795	1,879	1,847	1,800	1,861	1,878	1,827	1,450	1,950	2,171	3,180	3,438	3,826	3,666	3,925	3,975
50 - 54	1,680	1,608	1,655	1,615	1,782	1,740	1,616	1,585	1,434	1,417	1,572	1,418	1,185	1,514	1,583	2,089	2,270	2,629	2,510	2,551	2,842
55 - 59	1,490	1,531	1,528	1,461	1,444	1,320	1,390	1,294	1,248	1,244	1,269	1,263	948	1,187	1,267	1,368	1,521	1,649	1,607	1,777	1,777
60 - 64	927	921	827	880	856	894	822	757	692	701	704	718	545	657	729	648	730	821	747	761	767
65 - 69	182	211	190	215	244	202	184	196	137	187	173	158	116	142	166	217	193	227	201	235	214
70 - 74	83	62	72	45	81	58	74	65	61	54	51	67	29	42	52	46	88	88	82	94	91
>=75	28	29	30	21	24	39	28	35	24	27	24	18	16	32	29	28	34	43	55	40	50
Total	26,001	28,204	29,732	31,028	32,805	33,113	32,410	30,513	28,648	30,010	29,126	26,755	21,396	27,342	28,724	30,981	32,512	33,405	31,493	31,447	32,394
Baby boomer ages	11 - 29	12 - 30	13 - 31	14 - 32	15 - 33	16 - 34	17 - 35	18 - 36	19 - 37	20 - 38	21 - 39	22 - 40	23 - 41	24 - 42	25 - 43	31 - 49	32 - 50	33 - 51	34 - 52	35 - 53	36 - 54

sources: WCAP database (data ran on 03/01) & Annual Report, MT Division of Worker's Comp

Percent Injuries by Age

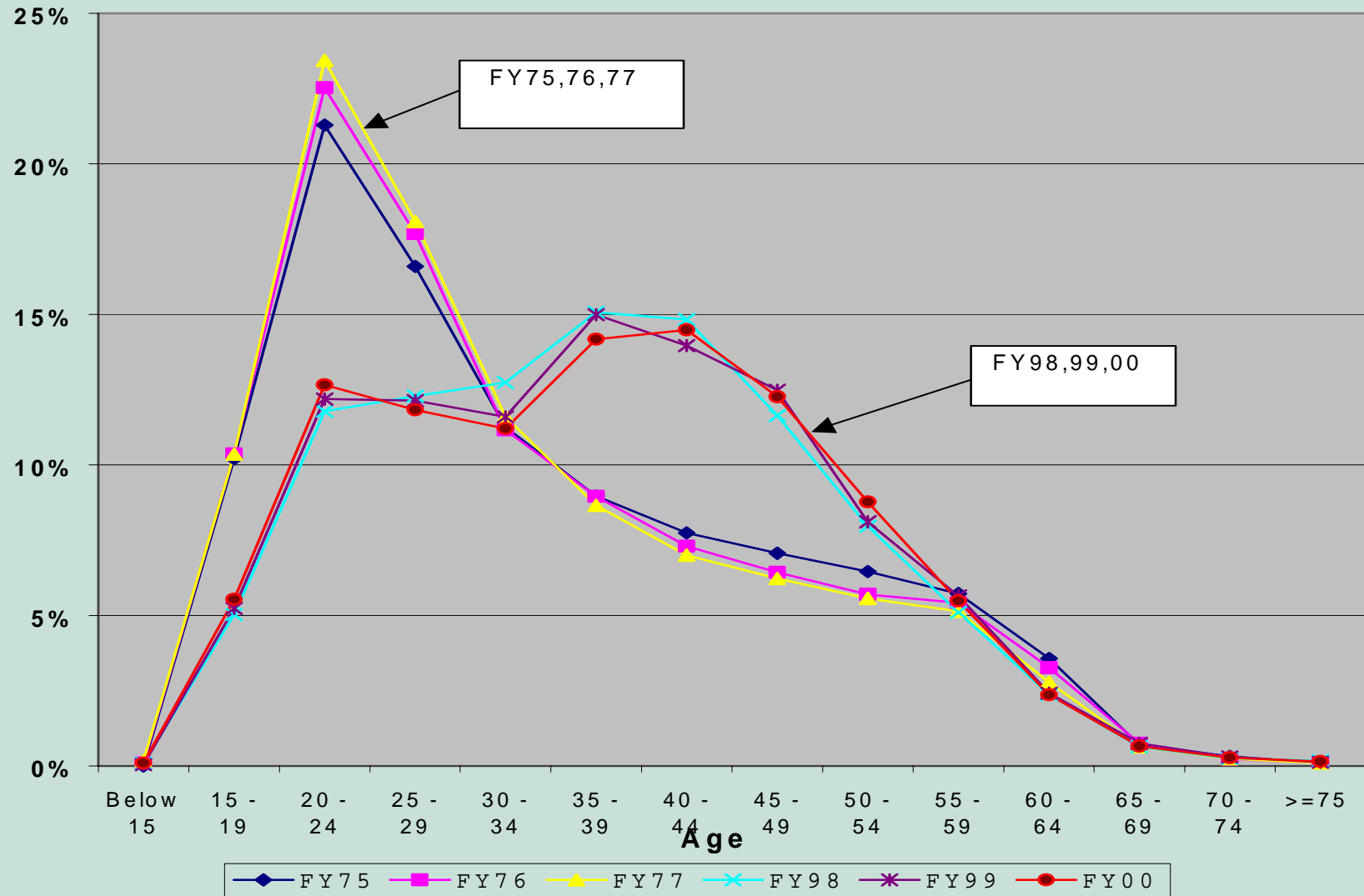
table 2.1

Age Group	FY75	FY76	FY77	FY78	FY79	FY80	FY81	FY82	FY83	FY84	FY85	FY86	FY87	FY88	FY89	FY95	FY96	FY97	FY98	FY99	FY00
Below 15	0.0%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.1%
15 - 19	10.2%	10.4%	10.4%	10.3%	10.8%	10.2%	9.1%	8.4%	7.1%	6.2%	6.1%	5.5%	5.5%	5.4%	6.0%	5.6%	5.6%	5.2%	5.0%	5.2%	5.5%
20 - 24	21.3%	22.5%	23.4%	23.8%	23.8%	22.8%	22.3%	21.4%	20.5%	20.2%	18.5%	16.3%	15.1%	13.9%	13.3%	12.3%	12.1%	11.8%	11.8%	12.2%	12.7%
25 - 29	16.6%	17.7%	18.1%	18.3%	18.4%	19.4%	19.8%	19.8%	19.6%	20.4%	19.9%	19.7%	18.7%	18.9%	17.6%	12.9%	13.0%	12.3%	12.3%	12.1%	11.8%
30 - 34	11.3%	11.2%	11.6%	11.9%	12.1%	12.7%	13.8%	14.4%	15.2%	15.6%	16.4%	16.7%	17.8%	17.7%	17.4%	15.5%	14.5%	13.4%	12.7%	11.6%	11.2%
35 - 39	9.0%	9.0%	8.7%	9.1%	8.7%	9.5%	9.3%	9.6%	10.7%	11.2%	11.3%	12.7%	13.6%	13.8%	14.1%	15.9%	15.5%	15.4%	15.1%	15.0%	14.2%
40 - 44	7.7%	7.3%	7.0%	7.3%	7.0%	7.0%	7.1%	7.3%	8.0%	8.1%	8.3%	8.6%	9.3%	9.9%	10.6%	13.3%	13.7%	14.1%	14.8%	14.0%	14.5%
45 - 49	7.1%	6.4%	6.2%	5.5%	5.6%	5.4%	5.8%	6.1%	6.3%	6.2%	6.4%	6.8%	6.8%	7.1%	7.6%	10.3%	10.6%	11.5%	11.6%	12.5%	12.3%
50 - 54	6.5%	5.7%	5.6%	5.2%	5.4%	5.3%	5.0%	5.2%	5.0%	4.7%	5.4%	5.3%	5.5%	5.5%	5.5%	6.7%	7.0%	7.9%	8.0%	8.1%	8.8%
55 - 59	5.7%	5.4%	5.1%	4.7%	4.4%	4.0%	4.3%	4.2%	4.4%	4.1%	4.4%	4.7%	4.4%	4.3%	4.4%	4.4%	4.7%	4.9%	5.1%	5.7%	5.5%
60 - 64	3.6%	3.3%	2.8%	2.8%	2.6%	2.7%	2.5%	2.5%	2.4%	2.3%	2.4%	2.7%	2.5%	2.4%	2.5%	2.1%	2.2%	2.5%	2.4%	2.4%	2.4%
65 - 69	0.7%	0.7%	0.6%	0.7%	0.7%	0.6%	0.6%	0.6%	0.5%	0.6%	0.6%	0.6%	0.5%	0.5%	0.6%	0.7%	0.6%	0.7%	0.6%	0.7%	0.7%
70 - 74	0.3%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.1%	0.2%	0.2%	0.1%	0.3%	0.3%	0.3%	0.3%	0.3%
>=75	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.2%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Baby boomer ages	11 - 29	12 - 30	13 - 31	14 - 32	15 - 33	16 - 34	17 - 35	18 - 36	19 - 37	20 - 38	21 - 39	22 - 40	23 - 41	24 - 42	25 - 43	31 - 49	32 - 50	33 - 51	34 - 52	35 - 53	36 - 54

sources: WCAP database (data ran on 03/01) & Annual Report, MT Division of Worker's Comp

Injured Persons by Age Groups

Fiscal Year Comparisons



Population by Age

Table 3

Age Group	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1995	1996	1997	1998	1999	2000
Below 15	196,800	193,990	193,160	192,470	190,190	187,710	189,720	192,550	195,600	198,200	199,220	195,060	191,970	190,280	189,720	190,250	188,340	187,380	187,550	187,850	185,620
15 - 19	77,730	78,310	78,270	77,960	76,590	74,260	71,730	69,080	66,180	64,120	62,950	62,330	60,820	59,280	57,850	69,340	71,400	72,460	72,650	72,890	74,010
20 - 24	68,000	69,750	71,730	73,470	74,140	73,740	72,700	71,580	70,730	68,930	65,800	61,170	56,550	52,230	49,380	57,220	57,840	57,080	57,060	57,110	59,510
25 - 29	59,850	64,290	65,470	68,110	70,350	71,570	71,100	70,810	70,260	69,000	67,270	64,940	62,480	60,300	58,230	46,180	46,790	45,740	45,610	45,550	46,010
30 - 34	48,850	50,240	55,280	57,740	60,210	62,160	65,890	66,570	68,730	70,010	70,560	69,760	69,030	68,120	67,410	57,470	54,380	52,270	52,230	52,240	49,080
35 - 39	39,720	40,900	42,760	45,760	47,480	48,370	49,080	53,130	55,300	58,520	61,330	64,390	64,250	65,530	66,780	71,590	70,620	70,270	70,430	70,610	67,550
40 - 44	37,560	37,810	38,520	39,530	40,300	40,650	41,910	43,340	46,190	47,810	48,880	48,990	52,050	53,300	56,260	73,750	75,200	76,520	76,690	76,910	77,200
45 - 49	38,210	37,990	37,920	37,760	37,150	36,320	36,570	37,410	38,800	39,920	40,510	40,910	41,320	43,040	44,070	63,040	67,600	66,870	66,970	67,140	69,210
50 - 54	38,760	38,750	38,640	38,660	38,040	37,390	37,400	37,290	36,730	36,270	36,000	35,610	35,630	36,190	36,900	48,330	49,830	53,870	53,930	54,040	58,400
55 - 59	36,660	36,690	36,970	37,200	37,040	36,530	36,340	36,150	36,660	36,800	36,870	36,390	35,640	34,540	33,890	40,440	42,010	43,080	43,110	43,190	46,740
60 - 64	32,220	32,770	33,540	34,330	34,720	34,800	35,270	35,780	35,850	36,010	35,850	35,160	34,350	34,260	34,200	36,730	37,260	37,130	37,210	37,290	38,540
65 - 69	25,630	26,880	27,820	28,380	29,090	29,770	30,370	31,020	31,830	32,370	32,500	32,660	32,750	32,510	32,500	32,650	32,800	32,290	32,560	32,660	31,810
70 - 74	18,700	19,320	20,100	20,720	21,340	22,130	22,960	23,880	24,550	25,220	25,680	26,050	26,570	27,380	27,940	28,810	28,410	28,210	28,440	28,520	28,410
75 +	30,860	30,850	31,320	31,980	32,530	33,290	34,220	35,310	36,550	37,630	38,840	40,310	41,640	43,200	44,490	53,030	54,260	55,620	56,050	56,180	58,190
Totals	751,525	760,516	773,477	786,048	791,149	790,670	797,241	805,882	815,943	822,794	824,245	815,716	807,037	802,148	801,609	870,825	878,736	880,787	882,488	884,179	892,280
Baby Boomer Age groups	11 - 29	12 - 30	13 - 31	14 - 32	15 - 33	16 - 34	17 - 35	18 - 36	19 - 37	20 - 38	21 - 39	22 - 40	23 - 41	24 - 42	25 - 43	31 - 49	32 - 50	33 - 51	34 - 52	35 - 53	36 - 54

Percent Population by Age

Table 4

Age Group	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1995	1996	1997	1998	1999	2000
Below 15	26.2%	25.5%	25.0%	24.5%	24.0%	23.7%	23.8%	23.9%	25.5%	24.1%	24.2%	23.9%	23.8%	23.7%	23.7%	21.8%	21.4%	21.3%	21.3%	21.2%	20.8%
15 - 19	10.3%	10.3%	10.1%	9.9%	9.7%	9.4%	9.0%	8.6%	8.6%	7.8%	7.6%	7.6%	7.5%	7.4%	7.2%	8.0%	8.1%	8.2%	8.2%	8.2%	8.3%
20 - 24	9.0%	9.2%	9.3%	9.3%	9.4%	9.3%	9.1%	8.9%	9.2%	8.4%	8.0%	7.5%	7.0%	6.5%	6.2%	6.6%	6.6%	6.5%	6.5%	6.5%	6.7%
25 - 29	8.0%	8.5%	8.5%	8.7%	8.9%	9.1%	8.9%	8.8%	9.2%	8.4%	8.2%	8.0%	7.7%	7.5%	7.3%	5.3%	5.3%	5.2%	5.2%	5.2%	5.2%
30 - 34	6.5%	6.6%	7.1%	7.3%	7.6%	7.9%	8.3%	8.3%	9.0%	8.5%	8.6%	8.6%	8.6%	8.5%	8.4%	6.6%	6.2%	5.9%	5.9%	5.9%	5.5%
35 - 39	5.3%	5.4%	5.5%	5.8%	6.0%	6.1%	6.2%	6.6%	0.7%	7.1%	7.4%	7.9%	8.0%	8.2%	8.3%	8.2%	8.0%	8.0%	8.0%	8.0%	7.6%
40 - 44	5.0%	5.0%	5.0%	5.0%	5.1%	5.1%	5.3%	5.4%	6.0%	5.8%	5.9%	6.0%	6.4%	6.6%	7.0%	8.5%	8.6%	8.7%	8.7%	8.7%	8.7%
45 - 49	5.1%	5.0%	4.9%	4.8%	4.7%	4.6%	4.6%	4.6%	5.1%	4.9%	4.9%	5.0%	5.1%	5.4%	5.5%	7.2%	7.7%	7.6%	7.6%	7.6%	7.8%
50 - 54	5.2%	5.1%	5.0%	4.9%	4.8%	4.7%	4.7%	4.6%	4.8%	4.4%	4.4%	4.4%	4.4%	4.5%	4.6%	5.5%	5.7%	6.1%	6.1%	6.1%	6.5%
55 - 59	4.9%	4.8%	4.8%	4.7%	4.7%	4.6%	4.6%	4.5%	4.8%	4.5%	4.5%	4.5%	4.4%	4.3%	4.2%	4.6%	4.8%	4.9%	4.9%	4.9%	5.2%
60 - 64	4.3%	4.3%	4.3%	4.4%	4.4%	4.4%	4.4%	4.4%	4.7%	4.4%	4.3%	4.3%	4.3%	4.3%	4.3%	4.2%	4.2%	4.2%	4.2%	4.2%	4.3%
65 - 69	3.4%	3.5%	3.6%	3.6%	3.7%	3.8%	3.8%	3.8%	4.2%	3.9%	3.9%	4.0%	4.1%	4.1%	4.1%	3.7%	3.7%	3.7%	3.7%	3.7%	3.6%
70 - 74	2.5%	2.5%	2.6%	2.6%	2.7%	2.8%	2.9%	3.0%	3.2%	3.1%	3.1%	3.2%	3.3%	3.4%	3.5%	3.3%	3.2%	3.2%	3.2%	3.2%	3.2%
75 +	4.1%	4.1%	4.0%	4.1%	4.1%	4.2%	4.3%	4.4%	4.8%	4.6%	4.7%	4.9%	5.2%	5.4%	5.6%	6.1%	6.2%	6.3%	6.4%	6.4%	6.5%
% Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Baby Boomer	11 - 29	12 - 30	13 - 31	14 - 32	15 - 33	16 - 34	17 - 35	18 - 36	19 - 37	20 - 38	21 - 39	22 - 40	23 - 41	24 - 42	25 - 43	31 - 49	32 - 50	33 - 51	34 - 52	35 - 53	36 - 54

C. Occupational Injuries/Illnesses by Gender

The percent of injuries/illnesses for male and female claimants has changed significantly over the years while the total number of claimants has remained relatively the same. There has been an increase in female claimants and a decrease in male claimants over the years, due in large part to an increase in the females entering the civilian work force. (see tables 5 & 6).

The gap between the number of injured males and injured females has narrowed over the years, but this trend is beginning to level off in the last six years (see graph 2). In general, this graph indicates that female workers might have safer work environments since the percent female employment over time is greater than their percent reported injuries; however, as more women enter into the more traditional male occupations their reported injuries will continue to increase. These age and gender trends are closely mirrored in other states.

While the 50% percent male to female population in Montana has remained constant over the years, the number of female workers entering the work force has increased over time. In 1970, female accounted for 34.9% of the civilian work force - they now account for 50.0%. (see Tables 7 , 8 & graph 3).

Injuries by Gender by Fiscal Year

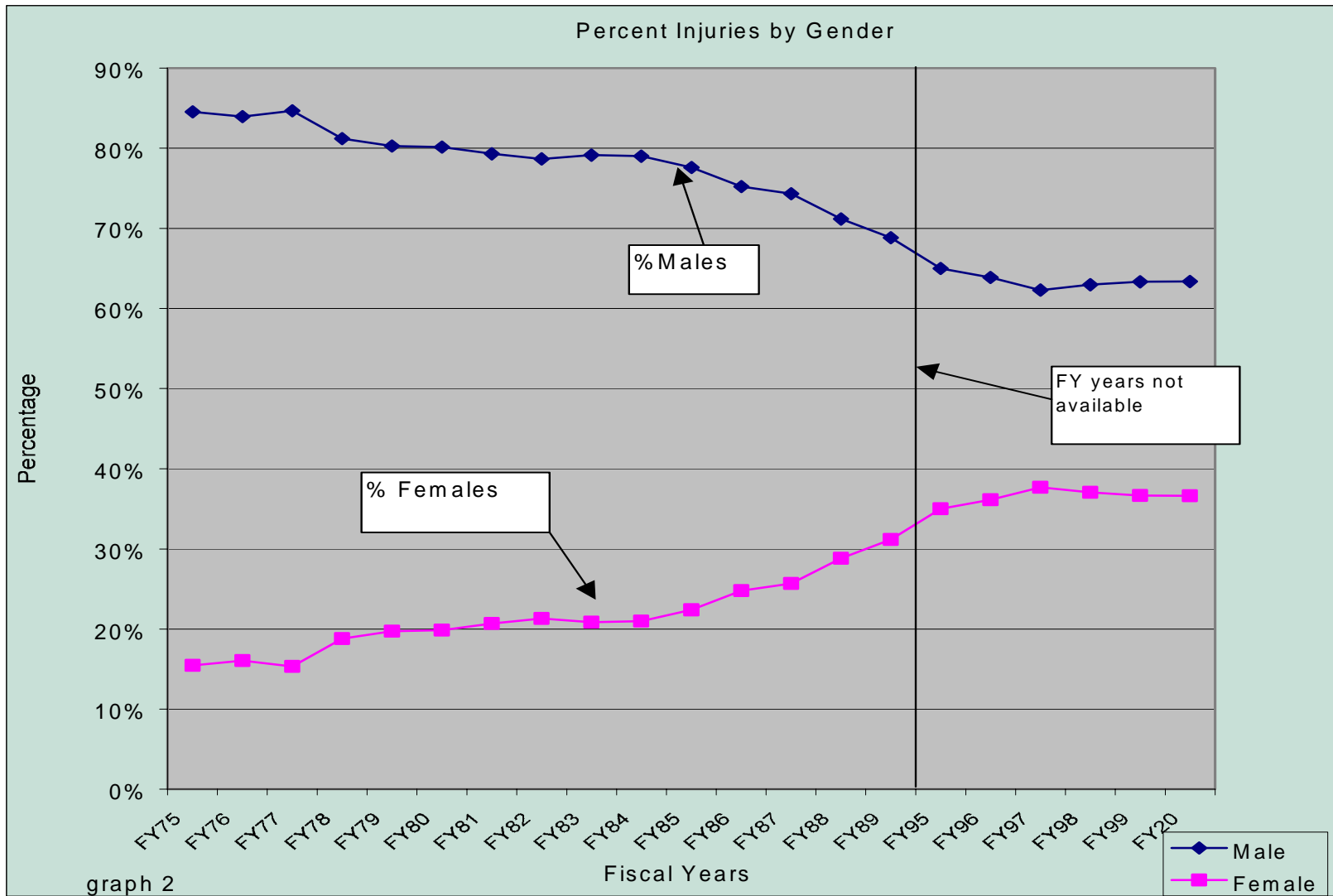
Table 5

	FY75	FY76	FY77	FY78	FY79	FY80	FY81	FY82	FY83	FY84	FY85	FY86	FY87	FY88	FY89	FY95	FY96	FY97	FY98	FY99	FY00
Male	22,929	24,685	26,171	26,027	27,527	27,836	26,872	25,135	24,216	25,466	24,936	22,158	17,648	20,336	20,413	20,630	21,243	21,200	20,182	20,158	20,820
Female	4,191	4,720	4,728	6,028	6,768	6,900	7,016	6,818	6,384	6,760	7,190	7,304	6,098	8,239	9,242	11,116	12,013	12,828	11,878	11,667	12,033
Total	27,120	29,405	30,899	32,055	34,295	34,736	33,888	31,953	30,600	32,226	32,126	29,462	23,746	28,575	29,655	31,746	33,256	34,028	32,060	31,825	32,853

% Injuries by Gender by Fiscal Year

Table 6

[illegible]



Employment by Gender		Table 7		
	1970	1980	1990	2000
Males	65.1%	58.9%	54.4%	50.00%
Females	34.9%	41.1%	45.6%	50.00%
Totals	100.0%	100.0%	100.0%	100.00%

Employment by Gender		Table 8		
	1970	1980	1990	2000
Males	160,488	193,532	190,686	n/a
Females	86,113	134,784	160,037	n/a
Totals	246,601	328,316	350,723	n/a

